CONTENTS

PART I

Preface vii

Organizing and Advisory Committees ix

MATERIALS CHEMISTRY

R. Roy*, Synthesizing new materials to specification 3

R. Schöllhorn*, From electronic/ionic conductors to superconductors 23

G. Alberti, M. Casciola, U. Costantino and F. Di Gregorio, Protonic conduction of polyhydrated phases obtained from colloidal dispersions of α-zirconium phosphate 40

R.H. Jarman, Ion exchange reactions of potassium titanyl phosphate 45

P.K. Dorhout, G.L. Rosenthal and A.B. Ellis, Two families of lamellar, luminescent solid solutions: the intercalative conversion of hydrogen uranyl phosphate aresenates to uranyl phosphate arsenates 50

D. Beltrán-Porter, P. Amorós, R. Ibáñez, E. Martínez, A. Beltrán-Porter, A. le Bail, G. Ferey and G. Villeneuve, Synthetic pathways to vanadyl phosphates 57

J. Alamo and J.L. Rodrigo, Thermal expansion of $LiZr_2(PO_4)_3$: water inclusion influence 70

P.G. Dickens, S.D. Lawrence, D.J. Penny and A.V. Powell, Insertion compounds of uranium oxides 77

F. Harb, B. Gérand, G. Nowogrocki and M. Figlarz, Structural filiation between a new hydrate $MoO_3 \cdot \frac{1}{3}H_2O$ and a new monoclinic form of MoO_3 obtained by dehydration 84

M.S.W. Vong, S. Stevenson and P.A. Sermon, Copper tungsten bronzes: novel preparative routes and reactivity 91

M. Ohashi, H. Nakano, S. Yamanaka and M. Hattori, Hydrogen uptake by layer structured β-ZrNCl 97

C. Delmas, Y. Borthomieu, C. Faure, A. Delahaye and M. Figlarz, Nickel hydroxide and derived phases obtained by chimie douce from $NaNiO_2$ 104

C. Cristiani, P. Forzatti, L. Lietti, I. Pasquon, P.L. Villa and M. Bellotto, Preparation chemistry and phase transformations in the Zn–Mn–Cr–O system 112

J. Amador, E. Gutiérrez Puebla, M.A. Monge, I. Rasines, J.A. Campa, J.M. Gomez de Salazar and C. Ruiz Valero, Crystal structure of $BaGd_2NiO_5$ prepared by reaction of Ni metal with $BaCO_3$ and Gd_2O_3 123

G. Svensson, X-ray diffraction and electron microscopy studies of new reduced phases in the Ba–Nb–O system 126

* Plenary lecture.

G. Huan, M. Greaney, M. Greenblatt, G. Liang and M. Croft, New rhenium chalcogenides with $[Re_6X_8]$-cluster units 134

J.R. Günter and M. Amberg, "High-temperature" magnesium tungstate, $MgWO_4$, prepared at moderate temperature 141

M.L. Phillips, T.E. Gier, M.M. Eddy, N.L. Keder, G.D. Stucky and J.D. Bierlein, Inclusion tuning of nonlinear optical materials: KTP isomorphs 147

R.C.T. Slade, B.C. West and G.P. Hall, Chemical and electrochemical mixed alkali metal insertion chemistry of the hexagonal tungsten trioxide framework 154

J.M. Gonzalez-Calbet, C. Rosique-Perez, M. Vallet-Regi, M.A. Alario-Franco and J. Rodriguez-Carvajal, Lithium insertion in reduced tungsten oxides 162

G.W. O'Bannon, M.J. McKelvy, W.S. Glaunsinger and R.F. Marzke, Structure and dynamics of ammonia in Li-ammonia intercalated TiS_2: a proton NMR study 167

M.J. McKelvy, J.M. Dunn, V.G. Young, Jr. and W.S. Glaunsinger, Interpretation of the equilibrium composition of ammoniated transition metal disulfides 174

G.A. Wiegers, A. Meetsma, R.J. Haange and J.L. de Boer, Crystal growth, structure and some properties of $PbNbS_3$, $SnSNbS_3$, $LaNbS_3$ and related misfit layer compounds 183

H.-R. Oswald, G. Stauber-Reichmuth and A. Reller, Transition-metal molybdenum or tungsten sulfides from amine precursors 192

F. Fievet, J.P. Lagier, B. Blin, B. Beaudoin and M. Figlarz, Homogeneous and heterogeneous nucleations in the polyol process for the preparation of micron and submicron size metal particles 198

L.S. Puckhaber, H. Cheung, D.L. Cocke and A. Clearfield, Reactivity of copper manganese oxides 206

E. Wolska and U. Schwertmann, The vacancy ordering and distribution of aluminium ions in γ-$(Fe, Al)_2O_3$ 214

S. Crouch-Baker and P.G. Dickens, Qualitative bonding models for some molybdenum oxide phases 219

C. Mazzocchia, F. Di Renzo, Ch. Aboumrad and G. Thomas, Stability of β-nickel molybdate 228

N. Floquet and O. Bertrand, Reactivity of the $Mo_{18}O_{52}(100)$ surface: a study of RHEED of the $Mo_{18}O_{52}$–MoO_3 structural transformation 234

Q. Huang, J.-Z. Xu and W. Li, Preparation of tetragonal defect scheelite-type $RE(MoO_4)_3$ (RE=La to Ho) by precipitation method 244

G. Weber, D. Viale, H. Souha, B. Gillot and P. Barret, Kinetic data and mechanistic model for the reaction between Si and CuCl 250

B. Fubini, V. Bolis, M. Bailes and F.S. Stone, The reactivity of oxides with water vapor 258

M. Taniguchi, M. Wakihara and S.K. Basu, Oxidation of copper Chevrel phase $Cu_2Mo_6S_{8-y}$ 273

A. Torkler, H. Niemann, W. Gunsser and W. Niemann, Gd/Cr-perovskite: a study of the sintering process 278

MINERALS AND REACTIVITY

S. Kume*, O. Ohtaka, T. Yamanaka and A. Navrotsky, High pressure polymorphs in ceramics and minerals GeO_2 and ZrO_2 285

A. Navrotsky, Silicates and germanates at high pressure 288

H. Eckert, J.P. Yesinowski and E.M. Stolper, Quantitative NMR studies of water in silicate glasses 298

R. Hellmann, D.A. Crerar and R. Zhang, Albite feldspar hydrolysis to 300°C 314

F. Adam, B. Dupre and C. Gleitzer, Cracking of hematite crystals during their low-temperature reduction into magnetite 330

B. Fubini, E. Giamello, L. Pugliese and M. Volante, Mechanically induced defects in quartz and their impact on pathogenicity 334

M.S. Whittingham, Transport properties of the mineral vermiculite 344

J.F. Brody, J.W. Johnson, G.B. McVicker and J.J. Ziemiak, Olefin isomerization over an alumina-pillared fluoromica catalyst 350

P. Malla, S. Yamanaka and S. Komarneni, Unusual water vapor adsorption behavior of montmorillonite pillared with ceramic oxides 354

H. Kodama and S.S. Singh, Polynuclear hydroxyaluminum–montmorillonite complexes: formation of 18.8 Å and 28 Å pillared structures 363

R.M. Lewis and H. Kuroda, Delaminated layered materials 373

J.J. Fitzgerald, A.I. Hamza, C.E. Bronnimann, S.F. Dec, Solid-state ^{27}Al and ^{29}Si NMR studies of the reactivity of the aluminum-containing clay mineral kaolinite 378

N. Chaikum and R.M. Carr, An ESR study of kaolinite under extreme conditions 389

T. Nishino, Characterization of δ-$BaCO_3$ 394

A. Marini, V. Berbenni, V. Massarotti, G. Flor, R. Riccardi and M. Leonini, Solid-state reaction study on the system Ni–Li_2CO_3 398

J.M. Longo and K.C. Voight, Synthesis of mixed-metal carbonates by grinding 409

G. Spinolo and U. Anselmi-Tamburini, Mechanism of low temperature calcite decomposition 413

SYNTHESIS AND REACTIVITY

E.W. Corcoran Jr. and D.E.W. Vaughan, Hydrothermal synthesis of mixed octahedral-tetrahedral oxides: synthesis and characterization of sodium stannosilicates 423

M.T. Weller and G. Wong, Characterisation of novel sodalites by neutron diffraction and solid-state NMR 430

P. Krijgsman, J.G.M. Becht and J. Schoonman, Hydrothermal processing of ceramic powders for alumina-magnesia spinels 436

W. Göpel, K. Schierbaum, H.-D. Wiemhöfer and J. Maier, Defect chemistry of tin(IV)-oxide in bulk and boundary layers 440

K.S. Suslick, D.J. Casadonte and S.J. Doktycz, The effects of ultrasound on nickel and copper powders 444

M. Senna and K. Okamoto, Rapid synthesis of Ti- and Zr-nitrides under tribochemical condition 453

J.M. Criado, C. Real and J. Soria, Study of mechanochemical phase transformation of TiO_2 by EPR. Effect of phosphate 461

W. Weppner, Reactivity of multinary solids 466

S.D. Dunmead, Z.A. Munir and J. Birch Holt, Gas–solid reactions under a self-propagating combustion mode 474

S. Fujitsu, K. Koumoto and H. Yanagida, Formation of energy barrier by adsorbed oxygen on ZnO 482

I. Bueno, C. Parada and R. Saez Puche, Crystal growth, reactivity and properties of $KLn(CrO_4)_2$ (Ln=La, Pr, Nd, Sm and Eu) 488

G.F. de la Fuente, L.R. Black, D.M. Andrauskas and H.R. Verdún, Growth of Nd-doped rare earth silicates by the laser floating zone method 494

T.A. Guiton and C.G. Pantano, Synthesis of ZnS whiskers 506

S.D. Cox, T.E. Gier, G.D. Stucky and J. Bierlein, Inclusion tuning of nonlinear optical materials: SHG of organic guests in molecular sieve hosts 514

P.D. Thompson and D.A. Keszler, The pyroborate $Sr_2ScLiB_4O_{10}$, a new structural type 521

H.-R. Oswald, P. Kuhn and A. Reller, Bimetallic phases from reduction of delafossite-type oxides in hydrogen 528

J.L. Shi, J.H. Gao and Z.X. Lin, Formation of monosized spherical aluminum hydroxide particles by urea method 537

J.L. Shi and Z.X. Lin, Preparation of ZrO_2 powder by oxalate precipitation 544

POLYMERS AND THE ORGANIC SOLID STATE

R.M. Penner, L.S. van Dyke and C.R. Martin*, Electrochemical evaluation of charge-transport rates in electronically conductive polymers 553

Z.S. Soos*, G.W. Hayden and S. Ramasesha, π-electronic structure of conjugated polymers 567

S.-M. Huang and R.B. Kaner, Divalent dopant ions for conducting polymers 575

N. Theophilou, Influence of the catalyst system on the structure and conductivity of a new $(CH)_x$ 582

M.G. Kanatzidis, H.O. Marcy, W.J. McCarthy, C.R. Kannewurf and T.J. Marks, In situ intercalative polymerization chemistry of FeOCl. Generation and properties of novel, highly conductive inorganic/organic polymer microlaminates 594

C.R. Theocharis, A.M. Clark, M.J. Godden and A.C. Perryman, Solid state reactions of metal complexes of substituted cyclopentanones: an infrared spectroscopic study 609

T. Zerlia, A. Marini, V. Berbenni, V. Massarotti, F. Giordano, A. La Manna, G.P. Bettinetti and C. Margheritis, Solid state interaction study on the system polyvinylpyrrolidone–XL/trimethoprim 613

H.K. Cammenga, S.M. Sarge and S. Eligehausen, A detailed study of the mechanism of an organic solid state reaction 625

PART II

OXIDES AND CERAMICS I

L. Livage*, C. Sanchez, M. Henry and S. Doeuff, The chemistry of the sol–gel process 633

L.C. Klein*, Sol–gel processing of ionic conductors 639

J.C. Pouxviel, S. Parvaneh, E.T. Knobbe and B. Dunn, Interactions between organic dyes and sol–gel matrices 646

M.G.L. Mirabelli, A.T. Lynch and L.G. Sneddon, Molecular and polymeric precursors to boron-based ceramics 655

K.E. Gonsalves and K.T. Kembaiyan, Synthesis of advanced ceramics and intermetallics from organometallic/polymeric precursors 661

C.H. Pai, K. Koumoto, S. Takeda and H. Yanagida, Preparation of SiC hollow particles by gas-phase reaction and thermoelectric properties of sintered bodies 669

H.S. Horowitz, A.J. Jacobson, J.M. Newsam, T.T. Lewandowski and M.E. Leonowicz, Solution synthesis and characterization of sillenite phases, $Bi_{24}M_2O_{40}$ (M=Si, Ge, V, As, P) 678

C.J.J. Tool and E.H.P. Cordfunke, Influence of precipitation on the microstructure and sinterability of yttria 691

M. Valigi, A. Cimino, D. Gazzoli and G. Minelli, The influence of additives (Cl^-, ReO_4^-, Ti(IV)) on some properties of ZrO_2 698

J. Soria, J.C. Conesa, J.S. Moya, R. Moreno and J. Requena, Effect of iron impurities in yttrium–partially stabilized zirconia 706

J. Nowotny, M. Sloma and W. Weppner, Surface reactivity of yttria-doped zirconia with oxygen 709

M. Kosugi, N.C. Tso and J.M. Sanchez, First-principles calculation of the Ni–Cr phase diagram 714

J.M. González-Calbet, M.J. Sayagués and M. Vallet-Regí, An electron diffraction study of new phases in the $LaNiO_{3-x}$ system 721

J. Maier, Kröger–Vink diagrams for boundary regions 727

P. Tailhades, C. Sarda, A.C. Vajpei, A. Rousset and B. Gillot, Structural analysis of submicron Ti- and Mn-ferrite spinels via their reactivity studies 734

A.C. Vajpei, A. Rousset, Uma, K. Chandra, I.P. Saraswat and V.K. Mathur, The characterization and thermal transformations of coprecipitated iron(III)–chromium(III)–hydroxide systems 741

W. Carrillo-Cabrera and D.J. Smith, HRTEM study of the surface and bulk of nickel oxide: influence of annealing and quenching 749

OXIDES AND CERAMICS II

H.R. Allcock*, Reactions of inorganic high polymers as a route to tailored solids 761

S.-I. Hirano* and K. Kato, Processing of crystalline $LiNbO_3$ films with preferred orientation through an organometallic route 765

A.J. Burggraaf, K. Keizer and B.A. van Hassel, Ceramic nanostructure materials, membranes and composite layers 771

A.S. Nagelberg, Growth kinetics of Al_2O_3/metal composites from a complex aluminium alloy 783

J.G.M. Becht, P.J. van der Put and J. Schoonman, CVD of laminar composites in the system TiN–TiB_2 789

L.E. McCandlish and R.S. Polizzotti, Control of composition and microstructure in the Co–W–C system using chemical synthetic techniques 795

J.M. Honig and P. Gopalan, Use of a mean-field model in the calculation of electrical transport effects in $Fe_{3(1-\delta)}O_4$ 802

M. Martin, Tracer diffusion in oxides in an oxygen potential gradient 807

P. Franke and R. Dieckmann, Defect structure and transport properties of mixed iron–manganese oxides 817

F.J.J. van Loo, W. Wakelkamp, G.F. Bastin and R. Metselaar, Diffusion of carbon in TiC_{1-y} and ZrC_{1-y} 824

S. Reyes, E. Iglesia and K.F. Jensen, Application of percolation theory concepts to the analysis of gas–solid reactions 833

M. Desmaison-Brut, J.G. Desmaison and P. Verdier, The reactivity in oxygen of two M–Si–Al–O–N oxynitride glasses (M=Ca, Mn) 843

J.-L. Hébrard, M. Pijolat and M. Soustelle, Kinetic data and mechanistic model for initial sintering of TiO_2 anatase powder 852

FILMS, GLASSES AND CATALYTIC MATERIALS

T.D. Moustakas*, The role of the tungsten filament in the growth of polycrystalline diamond films by filament-assisted CVD of hydrocarbons 861

J.M. Thomas*, Controlling the catalytic performance of solids 869

P. Vashishta, R.K. Kalia and I. Ebbsjö, Structural correlations and vibrational spectra of molten and glassy $GeSe_2$ 872

Y.M.M. Hornos, G.A. Antonio, J.P. Rino, I. Ebbsjö, R.K. Kalia and P. Vashishta, Molten Ag_2Se: a molecular dynamics study 882

J. Haber, T. Machej and R. Grabowski, Solid/solid wetting in MoO_3/TiO_2 system 887

F. Morin and L.-C. Dufour, High-temperature surface reactivity of TiO_2 in CO/CO_2 mixtures: a kinetic study 893

I.E. Wachs, J.-M. Jehng and F.D. Hardcastle, The interaction of V_2O_5 and Nb_2O_5 with oxide surfaces 904

A. Steinbrunn and M. Bordignon, Reactivity of molybdenum oxide thin films epitaxied on cobalt oxide: a surface study 911

B.A. Boukamp, I.C. Vinke, K.J. de Vries and A.J. Burggraaf, Surface oxygen exchange properties of bismuth oxide-based solid electrolytes and electrode materials 918

H. Chen and S.M. Heald, Glancing angle EXAFS studies of interfacial reactions: an application to Cu–Al thin films 924

D.L. Cocke, W.E. Daulat, M.S. Owens and R.B. Wright, The surface reactivity of zirconium–nickel and hafnium–nickel intermetallic compounds 930

G.A. Arbuckle, Y. Chen, C. Hidalgo-Luangdilok and A.B. Bocarsly, Electrochemical reactivity of ultra-thin cyanometallate films on electrode surfaces 941

Y. Ikuma and W. Komatsu, Interpretation of the difference in surface diffusion coefficients determined by dynamic and static methods 946

G.A. Antonio, R.K. Kalia and P. Vashishta, A molecular dynamics study of $SiSe_2$ glass 950

H. Iyetomi, P. Vashishta and R.K. Kalia, The intermediate-range order in molten and glassy $GeSe_2$ 954

H. Iyetomi and P. Vashishta, Density-functional theory of three-body interactions in liquids and glasses 959

S.-H. Chien, L.-Y. Shao, M. Che and L. Bonneviot, Stabilization and reactivity of Ni^+ ions on TiO_2 and TiO_2/SiO_2 systems 962

J.P. Rino, Y.M.M. Hornos, G.A. Antonio, I. Ebbsjö, R.K. Kalia and P. Vashishta, A molecular dynamics study of superdionic Ag_2Se 968

C.J.G. van der Grift, M. de Boer and J.W. Geus, The reactivity of a copper-based flue gas desulfurization absorbent 974

A. Tressaud, G. Demortain, J. Portier, B. Tanguy, C. Parent, P. Hagenmuller and H. Dexpert, Hyperquenched amorphous fluorides: optical and EXAFS studies 985

L.Y. Chiang, J.D. Passaretti, J.W. Swirczewski and R.R. Chianelli, Novel dehydrogenative condensation reactivity of rhenium sulfide with organic heterocyclic molecules 988

P. Murugaraj and J. Maier, Heterogeneous catalysis with composite electrolytes 993

K. Lázár, L. Guczi and B.M. Choudary, State of Fe^{2+} ions inside X zeolite lattice during $CO+H_2$ reaction 1000

J. Deng and X. Zhang, Amorphous alloy deposited on support and its hydrogenation activity 1006

T.I. Korányi, I. Manninger and Z. Paál, Sulfidation of Co–Mo catalysts by thiophene: structure and activity 1012

P. Porta, R. Dragone, M.L. Jacono, G. Minelli and G. Moretti, The reduction process of copper–zinc oxide–(alumina) methanol catalysts 1019

M. Gougeon, B. Maachi, A.C. Vajpei, A. Rousset and B. Gillot, Investigations on potassium ions influence on the morphology and reactivity of some potassium ferrites and potassium aluminium ferrites having spinel and β-alumina structures prepared from oxalate precursors 1025

HIGH TEMPERATURE OXIDE SUPERCONDUCTORS

B. Raveau*, C. Michel and M. Hervieu, Oxygen nonstoichiometry and superconductivity in mixed valence copper oxides 1035

T. Venkatesan, P. England, P.F. Miceli, E.W. Chase, C.C. Chang, B. Wilkens, J.M. Tarascon, X.D. Wu, A. Inam, B. Dutta, M.S. Hegde and J.B. Wachtman, As-deposited near-single crystalline high T_c and J_c and superconducting thin films by a pulsed laser deposition process 1043

M.E. Gross, P.K. Gallagher and W.L. Brown, Superconducting thin films and ion beam patterning using metal carboxylate precursors 1051

M.A. Alario-Franco and C. Chaillout, Nonstoichiometry and reactivity of $Ba_2YCu_3O_{7-\delta}$ 1056

J.M. Newsam, A.J. Jacobson, D.P. Goshorn, J.T. Lewandowski, D.B. Mitzi, A. Kapitulnik, D. Xie and W.B. Yelon, Orthorhombic and tetragonal structures in the $La(Ba_{2-y}La_y)Cu_3O_{7-x}$ system 1064

E. Schönherr, On the synthesis of $TmBa_2Cu_3O_n$ from Tm_2O_3, $BaCO_3$ and CuO 1080

H.S. Horowitz, R.K. Bordia, C.C. Torardi, K.J. Morrissey, M.A. Subramanian, E.M. McCarron, J.B. Michel, T.R. Askew, R.B. Flippen, J.D. Bolt and U. Chowdhry, The effect of synthesis methods on the processing and properties of $YBa_2Cu_3O_{6+x}$ 1087

J.A. Stuart, P.K. Davies and T.P. Feist, Fluorination of $YBa_2Cu_3O_{7-x}$ 1100

S.M. Zahurak, D.W. Murphy, S. Nakahara, W.W. Warren Jr., D.M. Krol, A.M. Thayer, D.C. Douglass, G.F. Brennert, S.H. Glarum, E.M. Gyorgy, S.M. Fine and M. Greenblatt, Effects of fluorination on the 90 K superconductor $Ba_2RCu_3O_{7-\delta}$ ($R=Y$, Eu; $0 \leqslant \delta \leqslant 1$) 1104

A. Tressaud, B. Chevalier, B. Lepine, K. Amine, J.M. Dance, L. Lozano, J. Darriet, J. Etourneau, R. Tournier, A. Sulpice, P. Lejay, J.L. Diot and P. Maestro, Influence of low-temperature fluorination process on the characteristics of superconductors $YBa_2Cu_3O_{7-\delta}$ and $Bi_4(Ca,Sr)_6Cu_4O_{16+\delta}$ 1109

J.R. Grasmeder, M.T. Weller, P.C. Lanchester and C.E. Meats, Superconductivity in the Y–La–Cu–O system 1115

H-X Liu, D.L. Cocke, D.G. Naugle and R.K. Pandey, Photoelectron spectroscopic study of the high T_c superconducting material $YBa_2Cu_3O_7$ 1125

P.K. Gallagher, G.S. Grader and H.M. O'Bryan, Effect of an oxygen gradient on the $Ba_2YCu_3O_x$ superconductor 1133

M. Schwartz, D. Cahen, M. Rappaport and G. Hodes, Quantitatively controlled, room temperature reduction of $YBa_2Cu_3O_{7-x}$ by electrochemical methods 1137

H.M. O'Bryan and P.K. Gallagher, Oxygen content and structure of $Ba_2YCu_3O_x$ below 525°C 1143

S.M. Fine and M. Greenblatt, Preparation and characterization of single-crystal $RBa_2Cu_3O_{7-\delta}$ (R=Er, Ho) 1149

E. Moran, U. Amador, M. Barahona, R. Saez-Puche, M.A. Alario-Franco, A. Fuertes and J.M. Gomez de Salazar, $Ba_2(RE)Cu_3O_{7-\delta}$(RE=La, Pr, Nd, Sm, Gd): crystal growth, structure and magnetic properties 1154

D. Beltrán-Porter, E. Martínez-Tamayo, R. Ibañez, A. Beltrán-Porter, J.V. Folgado, E. Escrivá, V. Muñoz, A. Segura and J. Martínez-Pastor, Comparative study of synthethic procedures for YBACUO-type oxides 1160

F. Garcia-Alvarado, E. Moran, M.A. Alario-Franco, M.A. Gonzalez, J.L. Vicent, F. Lera and C. Rillo, New materials derived from the barium lead bismuth oxide (BPP) superconductor 1167

W. Carrillo-Cabrera, H.-D. Wiemhöfer and W. Göpel, Ionic conductivity of oxygen ions in $YBa_2Cu_3O_{7-x}$ 1172

G.R. Paz-Pujalt, A.K. Mehrotra, S.A. Ferranti and J.A. Agostinelli, Solid state reactions in the formation of $YBa_2Cu_3O_{7-\delta}$ high T_c superconductor powders 1179

P. Murugaraj, J. Maier and A. Rabenau, Y–Ba–Cu–O superconductor: preparation of highly oriented ceramics, improvement of durability and precise determination of redox state 1183

J.M. Dance, A. Tressaud, B. Chevalier, J. Darriet and J. Etourneau, ESR spectra of high T_c superconducting oxides treated under various atmospheres 1188